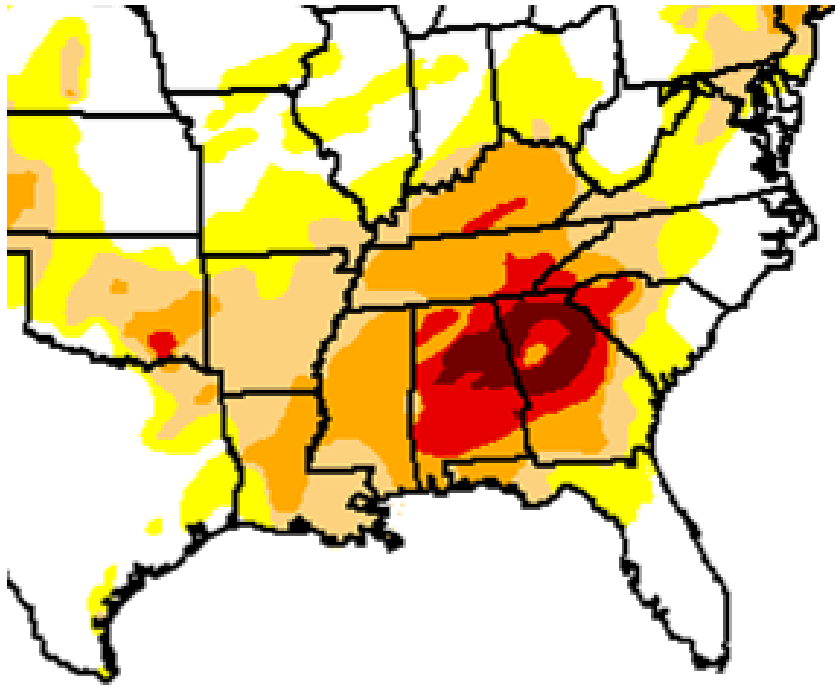


Southeast US Drought Update

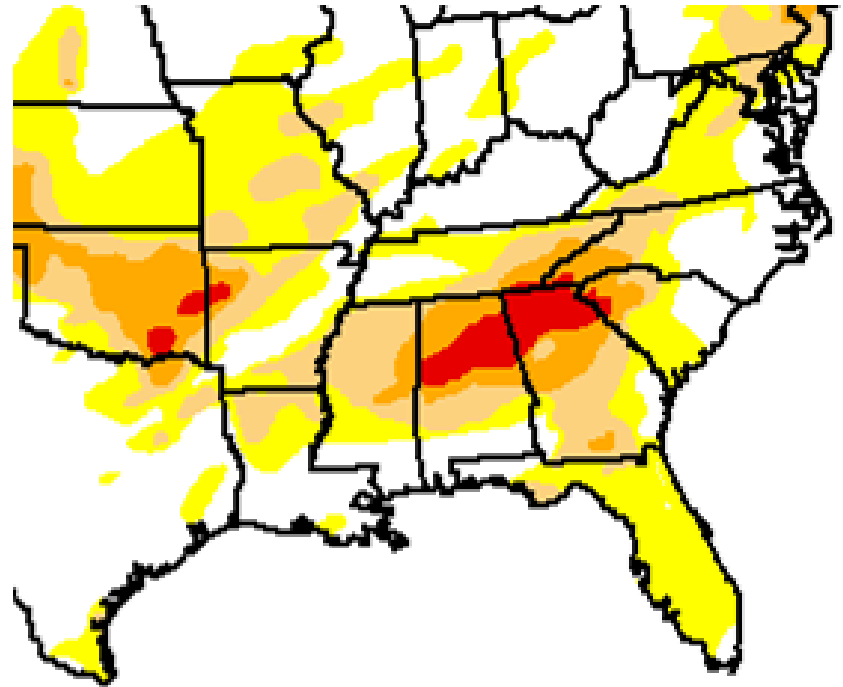
Dr. Chip Konrad

Director, NOAA Southeast Regional Climate Center
NOAA Carolina Integrated Science & Assessments (CISA) team
Associate Professor
University of North Carolina at Chapel Hill

NIDIS Drought Monitor



December 6, 2016



January 3, 2017

Intensity:



D0 Abnormally Dry



D1 Moderate Drought



D2 Severe Drought



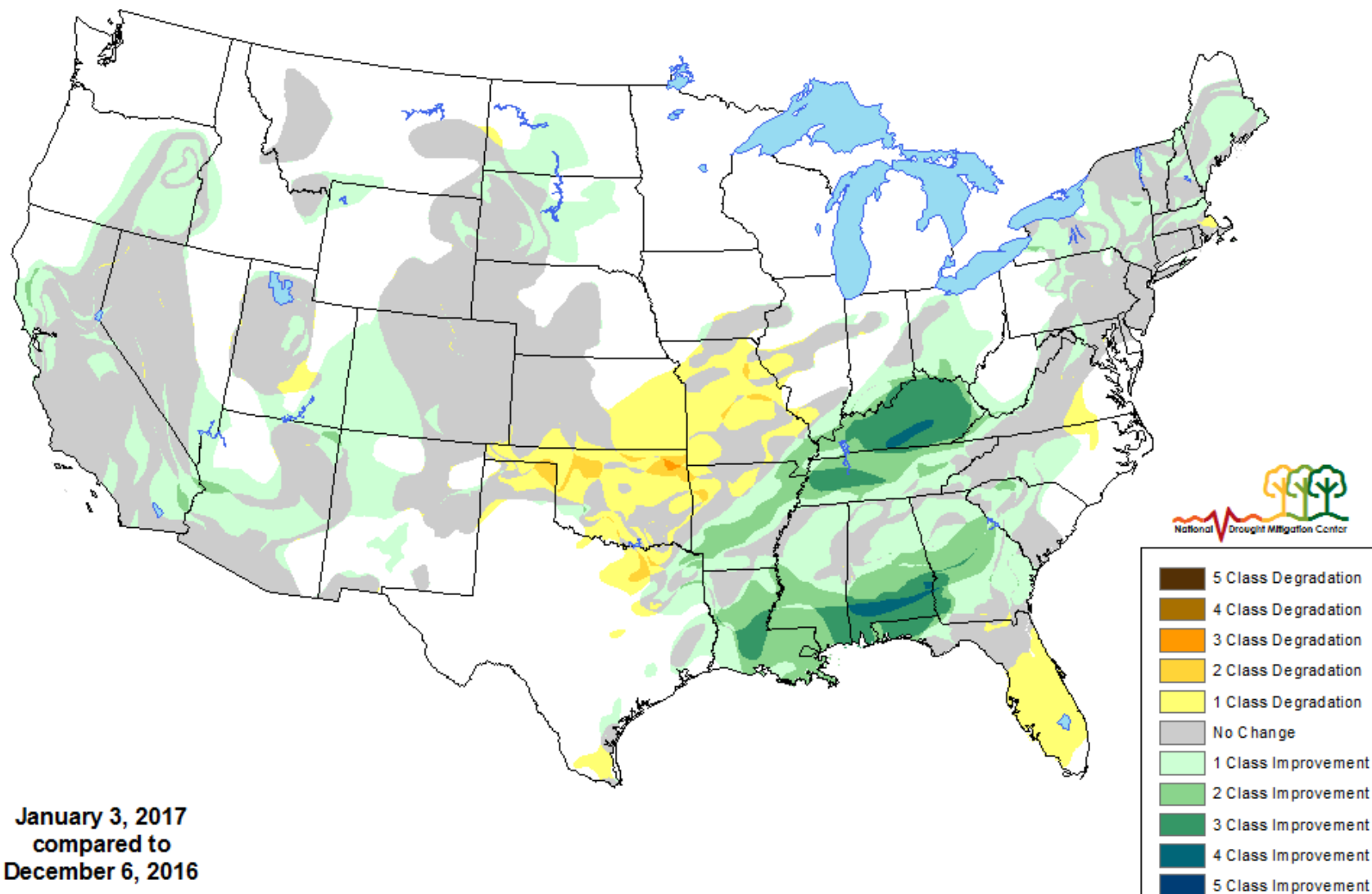
D3 Extreme Drought



D4 Exceptional Drought

<http://droughtmonitor.unl.edu>

U.S. Drought Monitor Class Change 1 Month

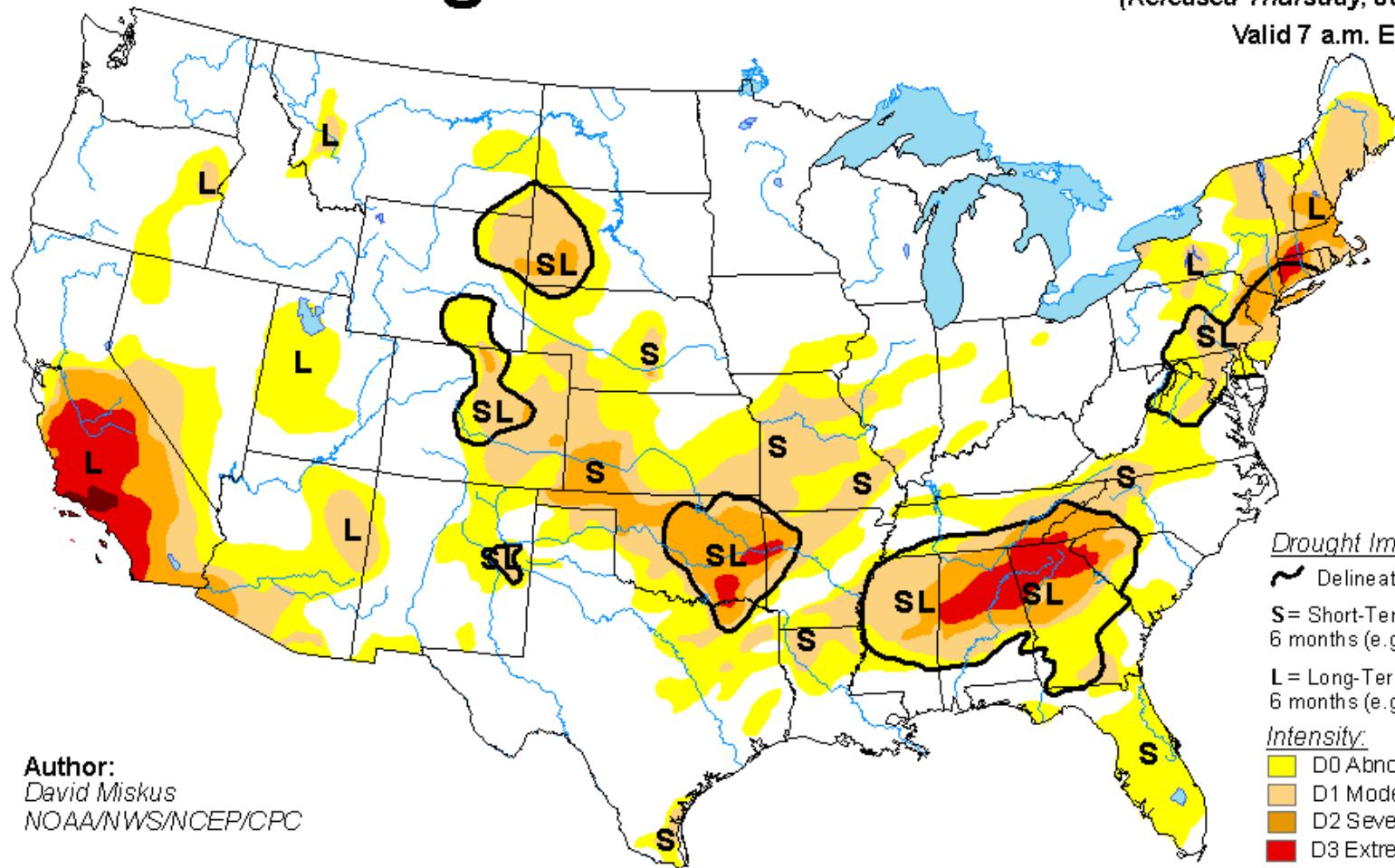


U.S. Drought Monitor

January 10, 2017

(Released Thursday, Jan. 12, 2017)

Valid 7 a.m. EST



Author:
David Miskus
NOAA/NWS/NCEP/CPC

Drought Impact Types:

~ Delineates dominant impacts

S= Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L= Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

Yellow D0 Abnormally Dry

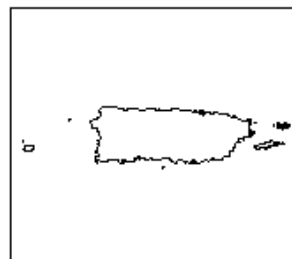
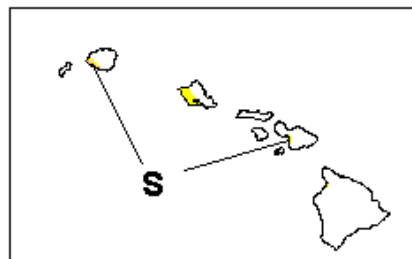
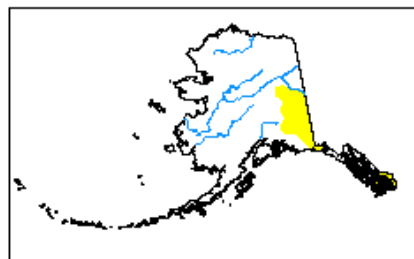
Light Orange D1 Moderate Drought

Dark Orange D2 Severe Drought

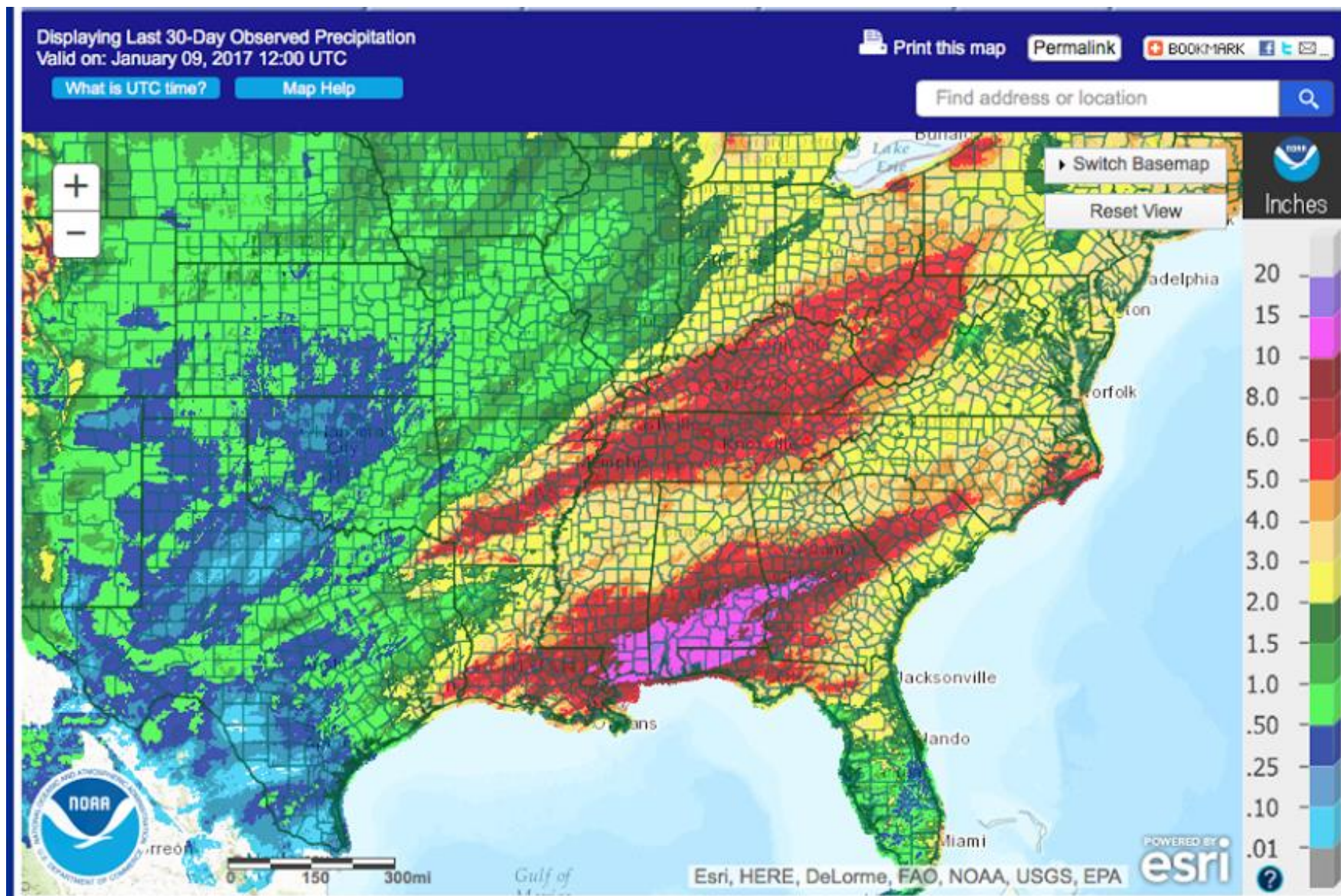
Red D3 Extreme Drought

Dark Red D4 Exceptional Drought

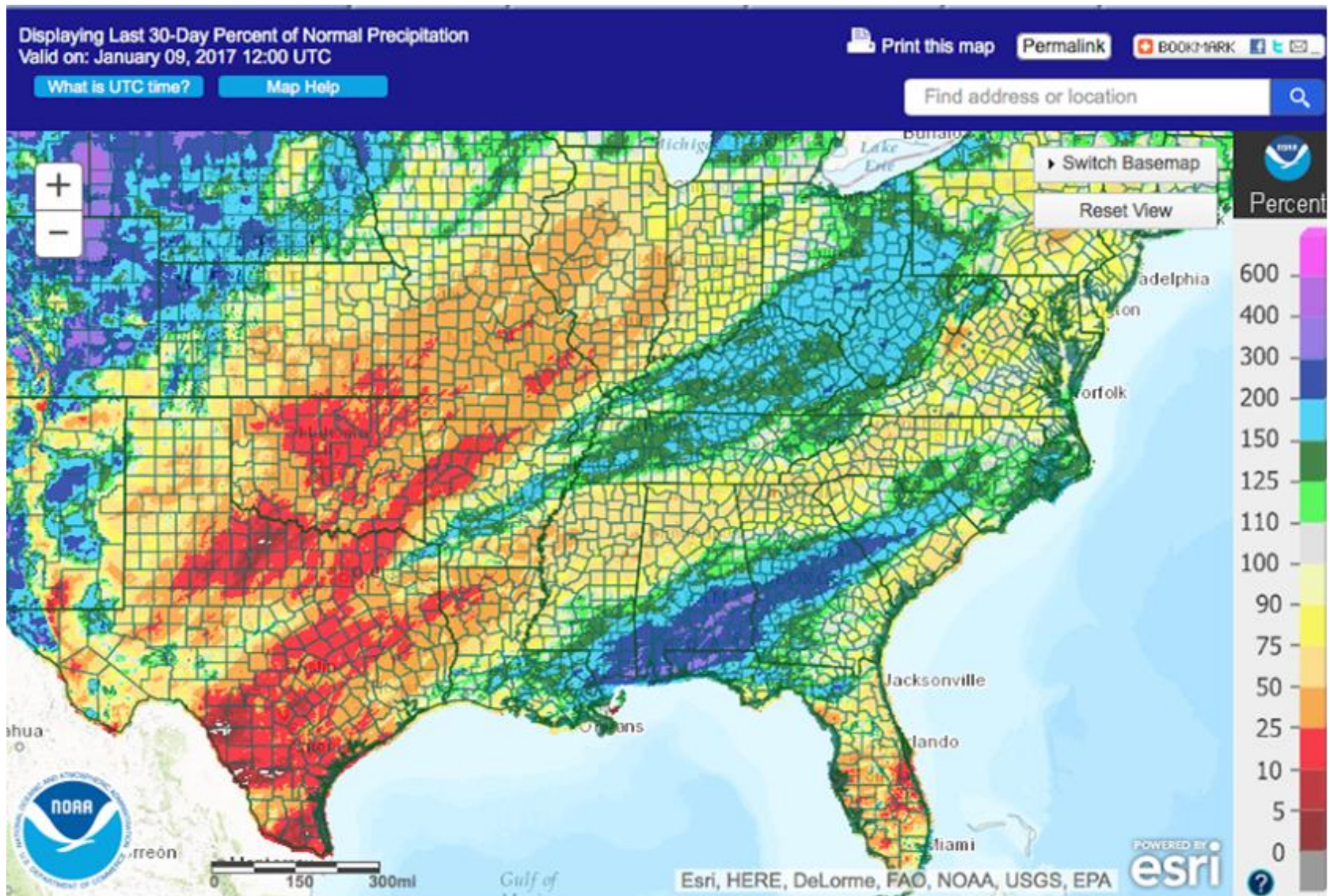
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>



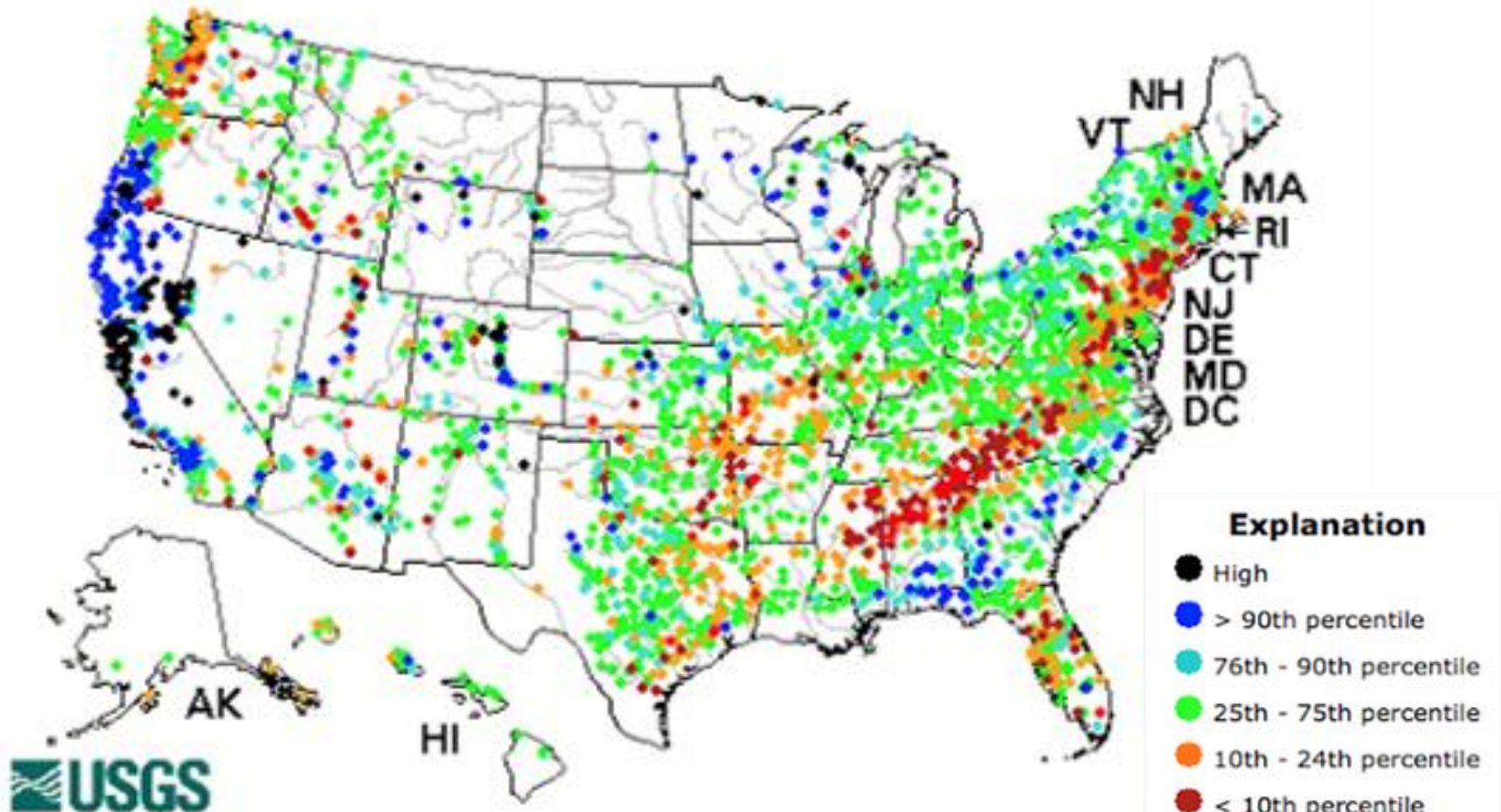
<http://water.weather.gov/precip/>



<http://water.weather.gov/precip/>

USGS Stream flow departure from normal

Monday, January 09, 2017 12:30ET



<https://waterdata.usgs.gov/nwis/rt>

Current drought impacts

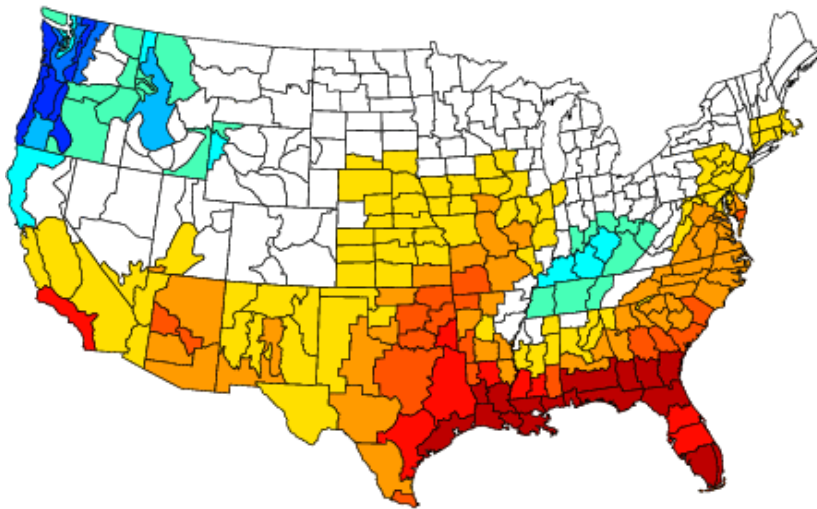
- Some small grains & forage were unable to be planted in the late fall due to drought conditions
- Potential for serious hay shortages later this winter, which would affect livestock
- SE droughts tend to hibernate during the winter

La Nina Influence on Drought

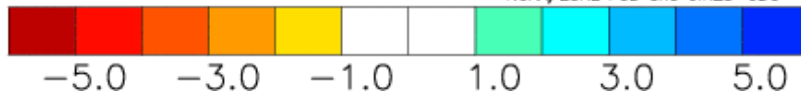
Composite Precipitation Anomalies (inches)

Nov to Mar 1954-55, 1955-56, 1970-71, 1973-74, 1975-76, 1988-89, 1964-65, 1999-00

Versus 1971-2000 Longterm Average



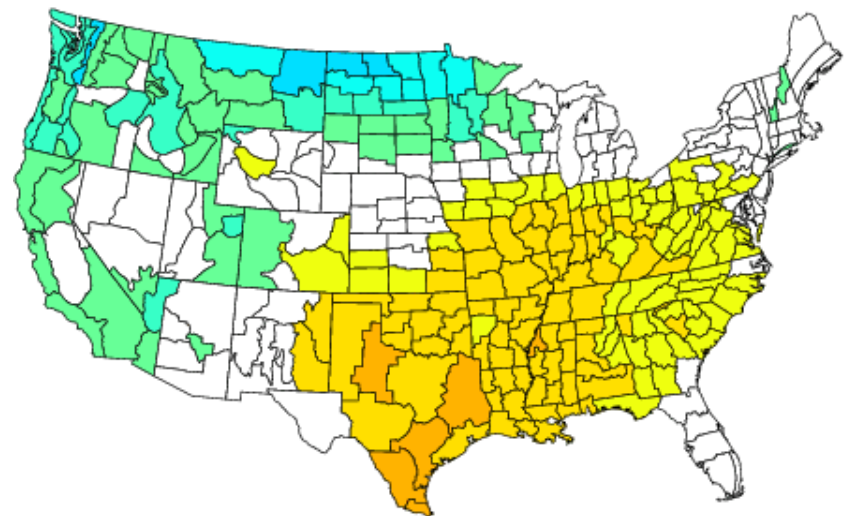
NOAA/ESRL PSD and CIRES-CDC



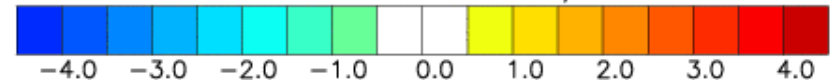
Composite Temperature Anomalies (F)

Nov to Mar 1954-55, 1955-56, 1970-71, 1973-74, 1975-76, 1988-89, 1964-65, 1999-00

Versus 1971-2000 Longterm Average

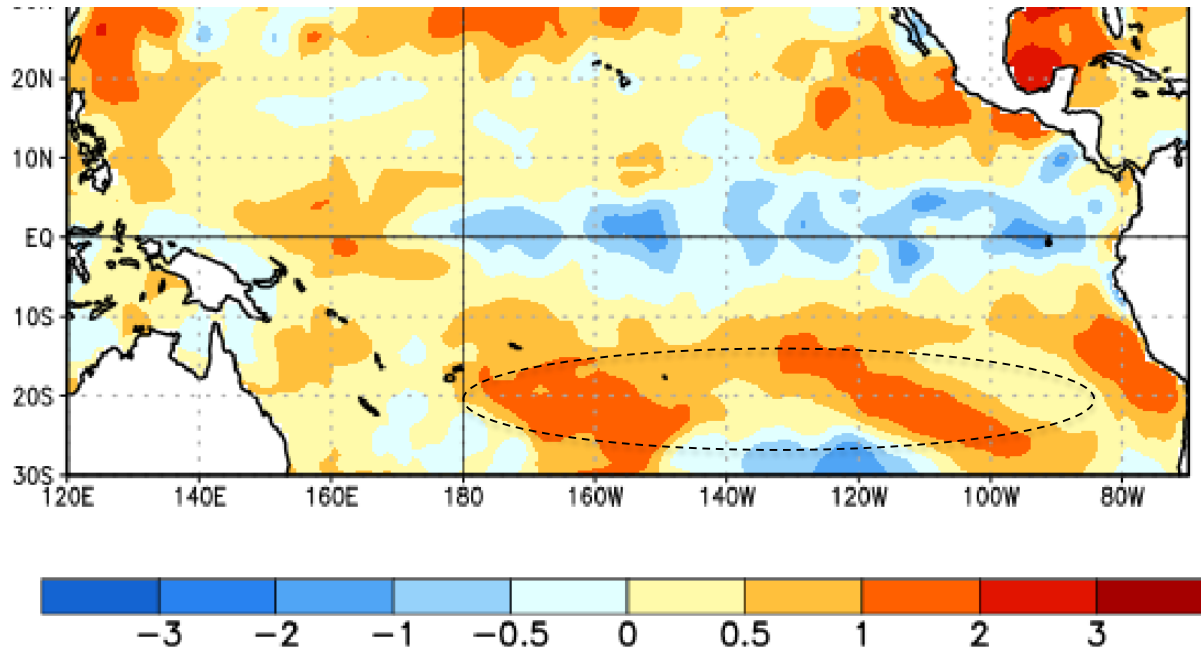


NOAA/ESRL PSD and CIRES-CDC



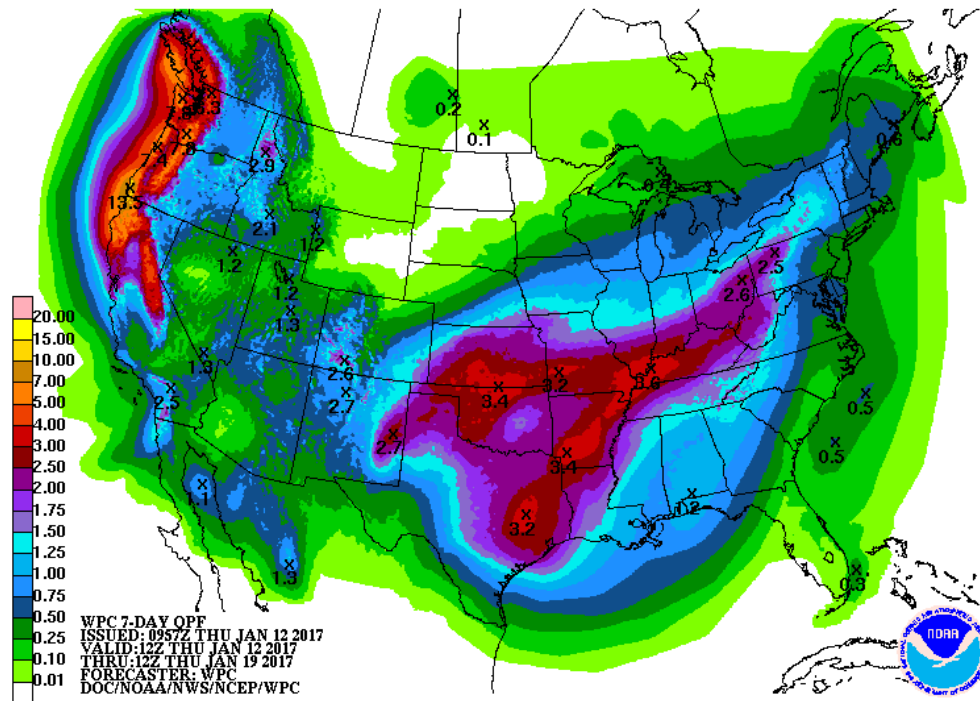
<http://www.weather.gov/ict/enso>

La Nina conditions



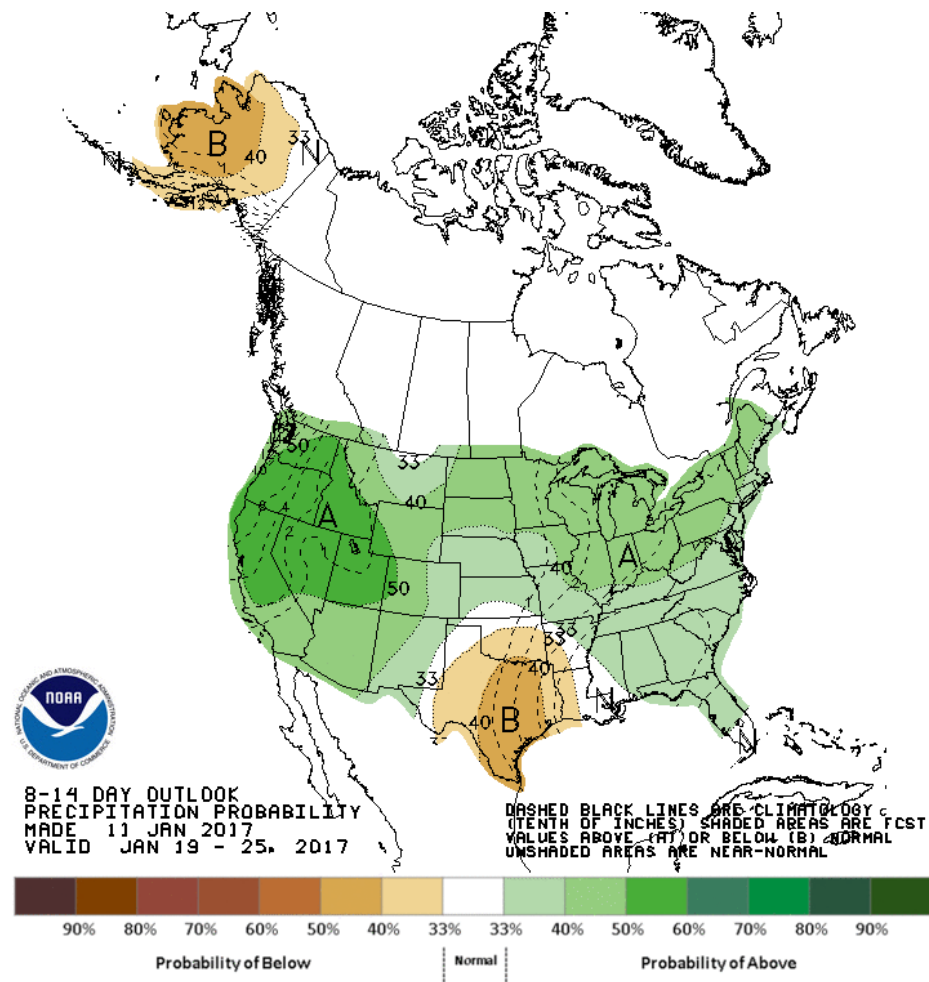
- La Nina advisory with slight La Nina conditions present across equatorial Pacific.
- Equatorial atmosphere still behaving in a La Nina fashion
- A transition to ENSO neutral conditions are expected over next 1.5 months (NOAA CPC)

7day precipitation



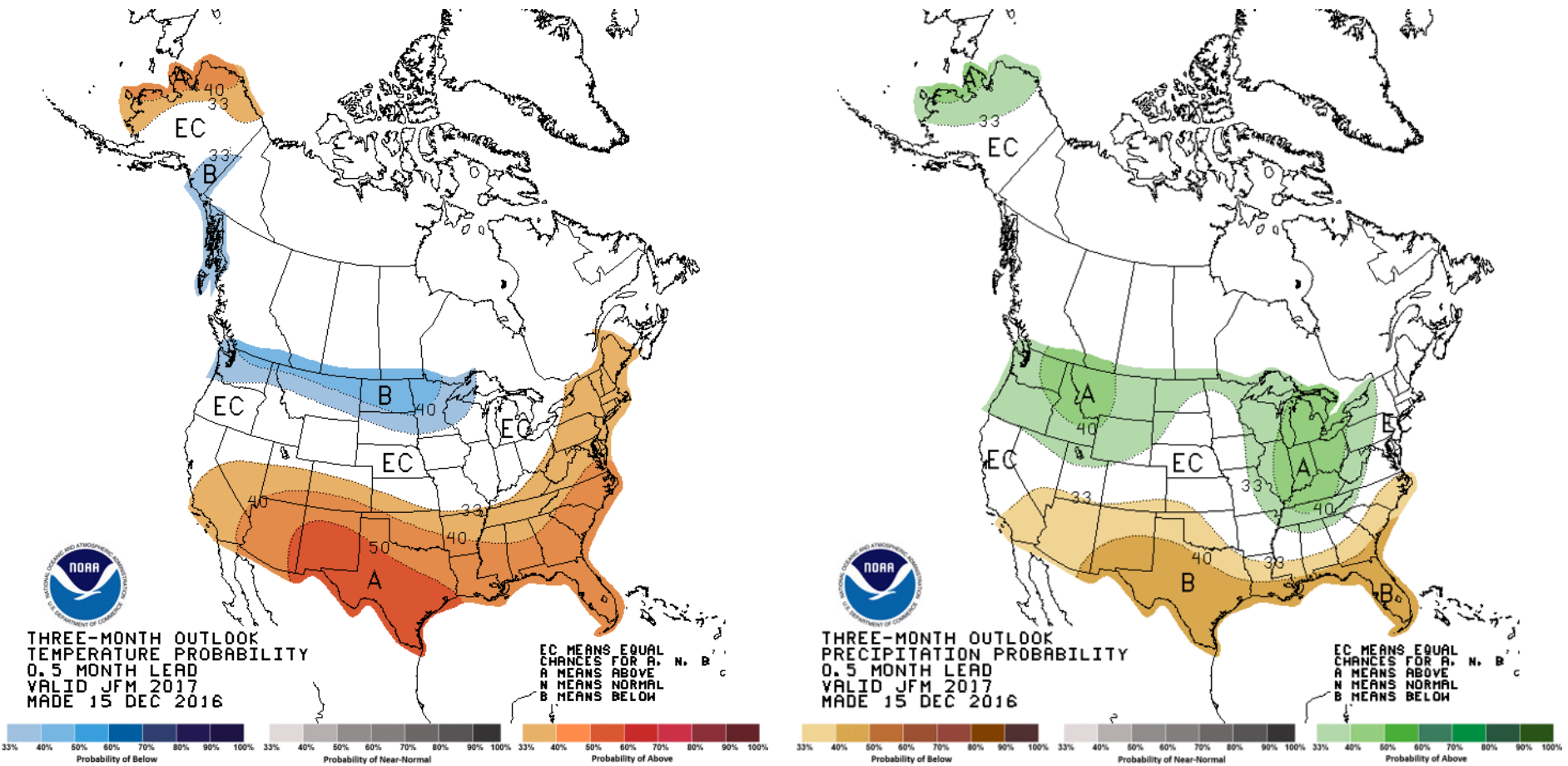
<http://www.wpc.ncep.noaa.gov/qpf/p168i.gif?1434459644>

8-14 day precipitation



<http://www.cpc.noaa.gov/products/predictions/814day/>

Outlook for remainder of winter

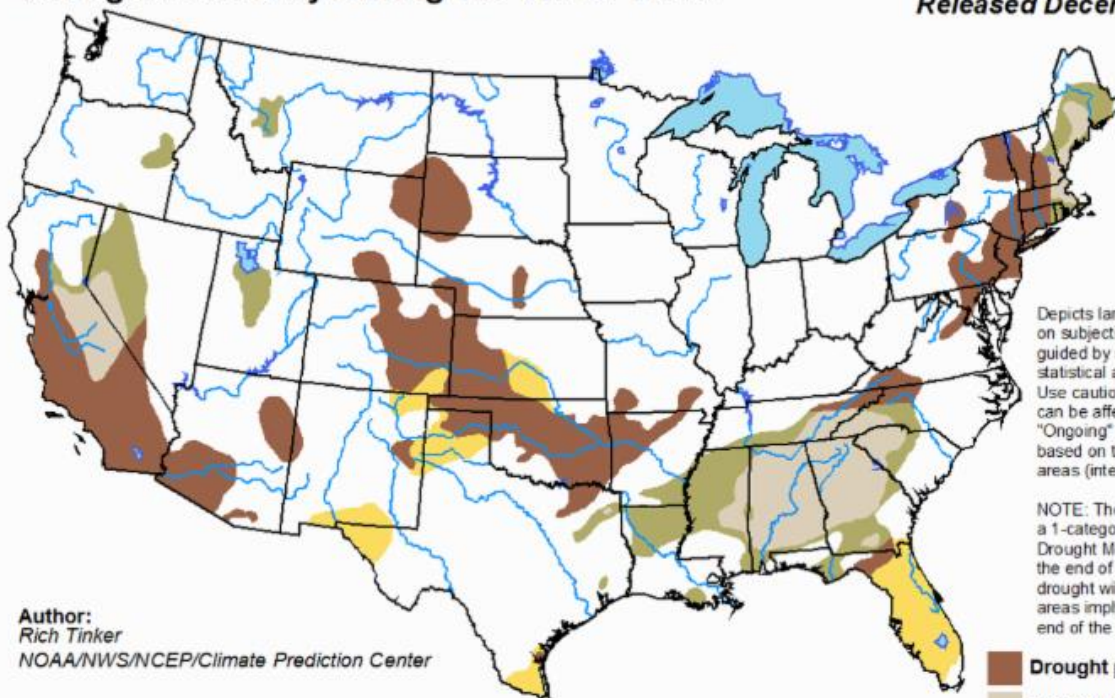


http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead02/off02_temp.gif

U.S. Monthly Drought Outlook

Drought Tendency During the Valid Period





Valid for January 2017
Released December 31, 2016

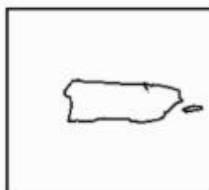
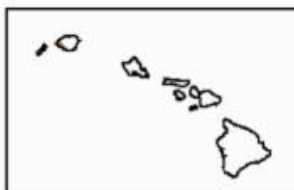


Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/3eZGd>

Concluding Statements

- SE droughts tend to hibernate during the winter
- They “wake up” in the spring/summer if there is not sufficient groundwater recharge during the cool season. Specifically this would affect water resources and not rain fed agriculture.
- Need “above average precipitation” to “kill” the hydrological drought that is currently present across North GA and AL
- Spring wildfire occurrence and agricultural drought will depend very much on how much rain we get in the late winter and spring.

Acknowledgements: Victor Murphy & SERCC staff